

### Remarks

The various parts of the Office Action (and other matters, if any) are discussed below under appropriate headings.

#### **Claim Rejections - 35 USC §103**

Claims 1-4, 7, 8 and 12-14 have been rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,749,821 to Simmons in view of U.S. Patent No. 5,356,363 to Kopp et al.

*The Examiner should withdraw the rejection because no teaching or suggestion has been found for sensing the presence or absence of each ply of a multi-ply stock material.*

In a proper *prima facie* case of obviousness, every element of the claims must be taught or suggested by the applied references, and there must be some motivation to combine the teachings of the references in the proposed manner.<sup>1</sup>

Unlike the claimed system, however, Simmons fails to disclose or suggest plural sensors respectively associated with separate infeed paths for detecting the presence or absence of each ply of a multi-ply sheet stock material. Simmons describes a conversion system for automatically producing a cushioning pad from a multi-ply stock material and placing the pad into a container. A stock supply assembly for this system includes a single photoelectric sensor 118 and corresponding retroreflector 120 that detect the end of the stock material. All three plies pass between the same sensor 118 and retroreflector 120. Thus, the sensor and retroreflector only sense whether any one ply is present or no plies are present; they cannot detect when one ply has run out when another ply is still present. When the end of the stock material has passed the sensor, the sensor sends a signal to a controller 32. The controller may use that signal to discontinue operation of the feed motor or to provide a visual indication that the stock material

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<sup>1</sup>M.P.E.P. §§2143 and 2143.01.

has run out and needs to be replaced with a fresh supply.<sup>2</sup> Simmons does not teach or suggest a separate sensor for each ply.

Like Simmons, Kopp also fails to teach or suggest a sensor for each ply of a multi-ply stock material. Kopp discloses an apparatus for making flat packaging bags, in other words a bag-making machine. Kopp's machine feeds three separate single-ply webs 2 of stock material along separate paths to three separate assemblies arranged side-by-side. Each of these assemblies independently form bags from their respective single-ply webs.<sup>3</sup> Similar to Simmons, Kopp uses a sensor to detect the end of a supply of stock material. When the end of the web passes the sensor, the sensor sends a signal to the bag-forming assembly associated with that sensor to interrupt the production of bags from that web. The supply reel for the web is replaced, and the leading end of the new web is stapled to the trailing end of the preceding web. Then the bag-making assembly for that web can be restarted. During this resupply operation, even though one web has ended and its corresponding bag-making assembly has been stopped, the other bag-making assemblies continue to independently form their respective webs into bags.<sup>4</sup>

Not only do Simmons and Kopp fail to teach or suggest the claimed sensors for each ply of a multi-ply stock material, no motivation has been found for combining their teachings.

Motivation to combine references can come from the problem to be solved—but neither Simmons nor Kopp recognize the problem of a multi-ply stock material where less than all of the plies may end before one or more other plies. When Simmons detects the end of the supply of stock material, Simmons does not recognize that one or more plies may have ended long before the longest ply, at which point it may be difficult or impossible to splice the shortest ply to a ply from a

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<sup>2</sup>Simmons, col. 6, lines 29-54.

<sup>3</sup>Kopp, col. 1, line 67, through col. 2, line 1.

<sup>4</sup>Kopp, col. 4, lines 55-64.

new supply. And Kopp discloses three separate single-ply webs fed along parallel paths to their own respective conversion assemblies. Kopp's system does not have this problem. In Kopp's system, if one web runs out before the others, Kopp can replace the supply for that web without stopping any of the other webs from continuing to feed into their respective bag-making assemblies.

Admittedly, the motivation does not have to be expressly articulated in the references, but the Examiner must articulate the motivation in the rejection, and he has not done so.<sup>5</sup>

The ordinary skilled person, presented with both Simmons and Kopp, would consider them to teach the same thing about sensing the end of the supply of stock material, without regard to whether the stock material has one ply or multiple plies. Consequently, Kopp does not appear to provide any advantage in sensing that would motivate the ordinary skilled person to apply to Simmons to change the way Simmons senses the supply of stock material.

The Examiner correctly noted that the references must be considered for what their disclosures taken as a whole would suggest to the person of ordinary skill in the art. The ordinary skilled person would learn from Kopp that converting a stock material along separate parallel paths allows the separate bag-making assemblies to operate independently of each other. This allows separate supplies of stock material, each of which can be replaced when depleted without affecting the operation of the other bag-making assemblies.

Upon viewing Kopp, the skilled person seeking to improve Simmons's system, would be motivated to provide separate supplies of stock material to a plurality of conversion machines placed side-by-side. Thus one or more conversion machines could continue to convert the stock material into cushioning pads even when the stock material runs out for one machine and has to be replenished.

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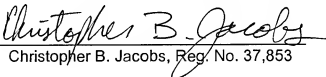
<sup>5</sup>M.P.E.P. §2144.08(III).

The Examiner's position that Kopp suggests sensing each ply of a multi-ply stock material and stopping a conversion machine whenever any one ply runs out can only be based on improper hindsight, because nothing in either Simmons or Kopp suggest sensing each ply of a multiple-ply stock material that is fed to a converter and stopping all of the plies from being fed when the end of any one ply is detected.

Because neither Simmons nor Kopp teach or suggest sensing each ply of a multi-ply stock material, the claims cannot be obvious in view of the proposed combination. Applicants request withdrawal of the rejection.

Respectfully submitted,

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